



## BRIDGE INSPECTION RECORD AND SUMMARY

REV. 5-30-97

INSPECTION TYPE		SUPPLEMENTAL (U/W)		INSPECTION DATE		5/9/06	
BRIDGE NO.	150006	COUNTY	CARTERET	ROUTE	NC-58	OVER	INTRACOASTAL WATERWAY
STRUCTURE TYPE		TIMBER FENDER SYSTEM		YEAR BUILT		1971	
LENGTH	N/A	ROUTE ORIENTATION	S - N	FOR SPANS	33	OF	59 SPANS
EVALUATION CODE: 0 - 2 CRITICAL, 3 & 4 POOR, 5 & 6 FAIR, 7 - 9 GOOD							
INSPECTION ITEM				ITEM 61		GRADE	
DECK ITEMS				GRADE		45 CHANNEL & CHANNEL PROT.	
1 WEARING SURFACE						a. WATERWAY	
2 DECK NO. OF EA. TYPE SPN. GRADE RATES SI & A ITEM 58						b. ALIGNMENT	
a. CONCRETE						c. SCOUR	
b. TIMBER						d. SLOPE PROT., DIKES RIP-RAP ETC.	
c. STEEL PLANK							
d. OPEN GRID						50 APPROACH ROADWAY CONDITION	
						51 APPROACH SLABS	
						52 PAINT SYSTEMS CODE	
						53 UTILITIES	
3 RAILING						54 RESPONSE TO LIVE LOAD	
a. CONCRETE						55 ESTIMATED REMAINING LIFE	
b. TIMBER							
c. ALUMINUM							
d. STEEL						60 REGULATORY SIGN NOTICE ISSUED	
4 CURBS - WHEELGUARDS - PARAPETS - MEDIANS						61 PROMPT - ACTION NOTICE ISSUED	
5 WALKWAYS (ON OR ATTACHED TO STRUCTURE)						62 PRESENTLY POSTED	
6 DECK EXP. JTS. OR DEVICES NO. OF EACH				a. STEEL PL. OR FINGER PL. b. MISC. PREFAB DEVICES c. COMPRESSION SEALS d. STANDARD JOINTS BORER DECAYED PILES & BORER DECAYED WALER		63 TOT. FIELD INSP. TIME (INCLUDE WRITE UP)(M/H)	
						64 TOTAL SNOOPER INSP. TIME (HRS)	
						65 TOTAL TRAFFIC CONTROL TIME (M/H)	
						70 SI&A GENERAL CONDITION RATINGS	
7 DECK DEBRIS (INCLUDE EXCESS SAND/ GRAVEL)				a. DECK		ITEM 58	
SUPER STR. ( FM. 1 (90) B TRUSS ) ITEM 59				b. SUPERSTRUCTURE		ITEM 59	
10 LONGITUDINAL BEAMS OR GIRDERS				c. SUBSTRUCTURE		ITEM 60	
11 LONGITUDINAL JOIST OR STRINGERS				d. CHANNEL & CHANNEL PROT.		ITEM 61	
12 INT. DIAP'S, X-FRAMES, BRACING, & CONN'S							
13 END DIAP'S, CURTAIN WALLS, & CONN'S						71 SI&A FIELD APPRAISAL RATINGS	
14 FLOOR BEAMS AND CONNECTIONS				a. WATERWAY ADEQUACY		N/A	
15 BEARINGS ASSEMBLIES (INCLUDE MISALIGN)				b. APPR. RDWY. ALIGNMENT			
16 DRAINAGE SYSTEMS (ON STRUCTURES)							
17 MOVABLE SPAN MACHINERY				72 FIELD SCOUR EVALUATION		N/A	
SUB STR ITEMS, ITEM 60 (INCLUDE SCOUR)						USE OF INSP. ACCESSIBILITY EQUIPMENT	
35 TIM. SUB STR.				a. ABUT. & INT. BENT CAPS & RISERS		SNOOPER (CODE P, S, 4 or N)	
				b. PILES, POST, SILLS, & BRACING		LADDER	
				c. BULKHEADS, WING'S, & TIE BACKS		Y/N	
36 CONC. SUB STR				a. ABUT. & INT. BENT CAPS		OVERSIDE LADDER	
				b. ABUT. & BENT COL'S & BREASTWALLS		Y/N	
				c. ABUT. & INT. BENT PILES		BUCKET TRUCK	
				d. BACKWALLS - WING'S - RETAIN. WALLS		Y/N	
				e. ABUT. AND BENT FOOTINGS & SILLS		BOAT	
						Y/N	
37 STEEL SUB. STR.				a. ABUT. & INT. BENT CAPS & RISERS		NOTE:	
				b. PILES AND BRACING AND BULKHEADS		ITEM 70 C ** FENDER SYSTEM ONLY	
38 FOUNDATION PILES TYPE MATERIAL							
39 SLOPE PROT., RIP - RAP (INCLUDE DRAINAGE)							
40 FENDER SYSTEMS				3			
41 DRIFT				7		80 INSPECTED BY :	
						81 REVIEWED BY : <i>[Signature]</i>	
SPECIAL INSPECTION REQUESTED FOR :							

**BRIDGE INSPECTION RECORD AND SUMMARY**

INSPECTION TYPE ROUTINE

BRIDGE NO. 150006 COUNTY CARTERET  
STRUCTURE TYPE RC DECK ON PPC GIRDERS

ROUTE NC58

OVER INTRACOSTAL WATERWAY

ROUTE ORIENTATION S - N

SPANS 1@65'4;12@65;12@92;1@96;1@132;1@96;12@92;18@65;1@65'4

EVALUATION CODE : 0 -2 CRITICAL, 3 &amp; 4 POOR, 5 &amp; 6 FAIR, 7 -9 GOOD

INSPECTION ITEM			ITEM 61		
DECK ITEMS		GRADES	45 CHANNEL & CHANNEL PROT.		
1. WEARING SURFACE			a. WATERWAY	8	
			b. ALIGNMENT	8	
			c. SCOUR	8	
			d. SLOPE PROT., RIP-RAP, DIKES, ETC.		
2 DECK NO. OF EA TYPE	a. CONCRETE	59	6	50 APPROACH ROADWAY CONDITION	
SPN GRADE	b. TIMBER			51 APPROACH SLABS	
RATES SI & A ITEM 58	c. STEEL PLANK			52 PAINT SYSTEM CODE	
	d. OPEN GRID			53 UTILITIES	
3 RAILING	a. CONCRETE		6	54 RESPONSE TO LIVE LOAD	
	b. TIMBER			55 ESTIMATED REMAINING LIFE	
	c. ALUMINUM				
	d. STEEL				
4. CURBS, WHEELGUARDS, PARAPETS, MEDIANS					
5. WALKWAYS (ON OR ATTACHED TO STRUCTURE)			60 REGULATORY SIGN NOTICE ISSUED		
			61 PROMPT-ACTION NOTICE ISSUED		
			62 PRESENTLY POSTED		
			63 TOT. FIELD INSP TIME (INCLUDE WRITE UP)(M/H)		
			64 TOTAL SNOOPER INSP. TIME (HRS)		
			65 TOTAL TRAFFIC CONTROL TIME (M/H)		
7. DECK DEBRIS (INCLUDE EXCESS SAND/GRAVEL)			7		
			70 SI&A GENERAL CONDITION RATINGS		
SUPER STR. (FM. 1 (90)B TRUSS) ITEM 59			a. DECK	ITEM 58	6
10. LONGITUDINAL BEAMS OR GIRDERS			b. SUPERSTRUCTURE	ITEM 59	5
11. LONGITUDINAL JOIST OR STRINGERS			c. SUBSTRUCTURE	ITEM 60	5
12. INT. DIAP'S, X-FRAMES, BRACING & CONN'S			d. CHANNEL & CHANNEL PROT.	ITEM 61	8
13. END DIAP'S, CURTAIN WALLS, & CONN'S			7		
14. FLOOR BEAMS AND CONNECTIONS			71 SI&A FIELD APPRAISAL RATINGS		
15. BEARING ASSEMBLIES (INCLUDE MISALIGN)			a. WATERWAY ADAQUACY	8	
16. DRAINAGE SYSTEM (ON STRUCTURE)			b. APPR. RDWY. ALIGNMENT	8	
17. MOVABLE SPAN MACHINERY			72 FIELD SCOUR EVALUATION		
			O		
SUB STR. ITEMS. ITEM 60 (INCLUDE SCOUR)			USE OF INSP. ACCESSIBILITY EQUIPMENT		
35. TIM SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS		SNOOPER (CODE P, S, 4, OR N)		Yes Yes
	b. PILES, POST, SILLS, & BRACING		LADDER		No
	c. BULKHEADS, WING'S & TIE BACKS		OVERSIDE LADDER		No
36. CONC SUB STR.	a. ABUT. & INT. BENT CAPS	5	BUCKET TRUCK		No
	b. ABUT. & BENT COL'S BREASTWALLS	5	BOAT		Yes
	c. ABUT. & INT. BENT PILES	7	OTHER		
	d. BACKWALLS, WING'S, RETAIN. WLLS	7			
	e. ABUT. & BENT FOOTINGS & SILLS	7			
37 STEEL SUB STR	a. ABUT. & INT. BENT CAPS & RISERS		SPECIAL INSPECTION REQUESTED FOR		
	b. PILES, BRACING, AND BULKHEADS				
38 FOUNDATION PILES TYPE MATERIAL			7 NOTE		
39. SLOPE PROT., RIP-RAP (INCLUDE DRAINAGE)			7		
40 FENDER SYSTEMS			8		
41 DRIFT			7		
			80 INSPECTED BY:	R.D. Kent	
			81 REVIEWED BY		

## BRIDGE INSPECTION RECORD AND SUMMARY

REV. 5-30-97

INSPECTION TYPE		SUPPLEMENTAL (U/W)		INSPECTION DATE		6/19/01	
BRIDGE NO.	150006	COUNTY	CARTERET	ROUTE	NC-58	OVER	INTRACOASTAL WATERWAY
STRUCTURE TYPE	TIMBER FENDER SYSTEM			YEAR BUILT	1971		
LENGTH	N/A	ROUTE ORIENTATION	S - N	FOR SPANS	33	OF	59 SPANS
EVALUATION CODE: 0 - 2 CRITICAL, 3 & 4 POOR, 5 & 6 FAIR, 7 - 9 GOOD							
INSPECTION ITEM				ITEM 61		GRADE	
DECK ITEMS				GRADE			
1 WEARING SURFACE				45 CHANNEL & CHANNEL PROT.		a. WATERWAY 8	
2 DECK						b. ALIGNMENT 8	
NO. OF EA.	a. CONCRETE					c. SCOUR 7	
TYPE SPN.	b. TIMBER					d. SLOPE PROT., DIKES	
GRADE	c. STEEL PLANK					RIP-RAP ETC.	
RATES	d. OPEN GRID			50 APPROACH ROADWAY CONDITION			
SI & A ITEM				51 APPROACH SLABS			
58				52 PAINT SYSTEMS		CODE	
3 RAILING				53 UTILITIES			
a. CONCRETE				54 RESPONSE TO LIVE LOAD			
b. TIMBER				55 ESTIMATED REMAINING LIFE			
c. ALUMINUM							
d. STEEL				60 REGULATORY SIGN NOTICE ISSUED		NO	
4 CURBS - WHEELGUARDS - PARAPETS - MEDIANS				61 PROMPT - ACTION NOTICE ISSUED		NO	
5 WALKWAYS (ON OR ATTACHED TO STRUCTURE)				62 PRESENTLY POSTED		N/A	
6 DECK EXP. JTS. OR DEVICES				63 TOT. FIELD INSP. TIME (INCLUDE WRITE UP)(M/H)		22 M/H	
NO. OF EACH				64 TOTAL SNOOPER INSP. TIME (HRS)			
BORER DECAYED PILES & BORER DECAYED WALER				65 TOTAL TRAFFIC CONTROL TIME (M/H)			
				70 SI&A GENERAL CONDITION RATINGS			
7 DECK DEBRIS (INCLUDE EXCESS SAND / GRAVEL)				a. DECK		ITEM 58	
SUPER STR. ( FM. 1 (90) B TRUSS ) ITEM 59				b. SUPERSTRUCTURE		ITEM 59	
10 LONGITUDINAL BEAMS OR GIRDERS				c. SUBSTRUCTURE		ITEM 60 **5	
11 LONGITUDINAL JOIST OR STRINGERS				d. CHANNEL & CHANNEL PROT.		ITEM 61 7	
12 INT. DIAP'S, X-FRAMES, BRACING, & CONN'S							
13 END DIAP'S, CURTAIN WALLS, & CONN'S							
14 FLOOR BEAMS AND CONNECTIONS							
15 BEARINGS ASSEMBLIES (INCLUDE MISALIGN)							
16 DRAINAGE SYSTEMS (ON STRUCTURES)							
17 MOVABLE SPAN MACHINERY				72 FIELD SCOUR EVALUATION		N/A	
SUB STR ITEMS, ITEM 60 (INCLUDE SCOUR)							
35 TIM. SUB STR.						USE OF INSP. ACCESSIBILITY EQUIPMENT	
a. ABUT. & INT. BENT CAPS & RISERS				SNOOPER (CODE P, S, 4 or N)		N	
b. PILES, POST, SILLS, & BRACING				LADDER		Y/N N	
c. BULKHEADS, WING'S, & TIE BACKS				OVERSIDE LADDER		Y/N N	
36 CONC. SUB STR.				BUCKET TRUCK		Y/N N	
a. ABUT. & INT. BENT CAPS				BOAT		Y/N Y	
b. ABUT. & BENT COL'S & BREASTWALLS				OTHER		Y/N N	
c. ABUT. & INT. BENT PILES							
d. BACKWALLS - WING'S - RETAIN. WALLS							
e. ABUT. AND BENT FOOTINGS & SILLS							
37 STEEL SUB. STR.				NOTE:			
a. ABUT. & INT. BENT CAPS & RISERS							
b. PILES AND BRACING AND BULKHEADS							
38 FOUNDATION PILES TYPE MATERIAL							
39 SLOPE PROT., RIP - RAP (INCLUDE DRAINAGE)							
40 FENDER SYSTEMS				5			
41 DRIFT				7		80 INSPECTED BY: <i>M. N. J.</i>	
						81 REVIEWED BY:	
SPECIAL INSPECTION REQUESTED FOR :							

State of North Carolina  
Dept. of Transportation  
Division of Highways

Bridge Maint. Unit  
Bridge Inspection Sect.

Team Leader: W.H. LOTZ  
Assisted By: D.A. HANCOCK, P.G. RUTHERFORD

**FIELD INSPECTION REPORT**  
BRIDGE INSPECTION & ANALYSIS

Bridge No. 150006  
Route NC-58  
County CARTERET  
Date: 5/9/06

Item No.	
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40	<p>FENDER ( 5 )</p> <p>CCA PILES SHOW EVIDENCE OF MINOR BORER ACTIVITY IN THE TIDAL ZONE. RANDOM PILES RANDOM LOCATIONS SHOW BORER HOLES TO 1" DEEP X 1" DIAMETER. MOST PILES SHOW VERTICAL CRACKS TO 1/16" WITH A FEW CRACKS OPEN TO 3/8". RANDOM AREAS OF SURFACE DELAMINATION TO 1/2" DEEP. VERTICAL CLEARANCE MARKERS ARE INEFFECTIVE, BOARDS DECAYED, NUMBERS MISSING.</p> <p>ORIGINAL CREOSOTE PILES ARE HEAVILY BORER DECAYED AND ARE SEPARATED FROM THEIR STUBS, CREATING AN UNDESIRABLE DEAD LOAD ON FENDER.</p> <p>NORTH FENDER NORTH SIDE MISALIGNED AND LEANING TOWARDS CHANNEL + / - 18" AT EACH END. MISALIGNMENT AT CENTER SECTIONS. RANDOM AREAS SHOW IMPACT DAMAGE. FENDER SHOWS EXCESSIVE MOVEMENT WHEN SUBJECTED TO LARGE BOAT WAKES.</p> <p>CLUSTER 1 (7 PILES) KING PILE 2 IN. DIAMETER BORER HOLE TO 1 1/2" DEEP IN TIDAL ZONE. 1 PILE N. SIDE BORER HOLE 9" V X 2" W X 2" DEEP NEAR LOW TIDE MARK. 1 PILE N. SIDE BORER HOLE 14" V X 3 1/2" W X 2 1/2" DEEP NEAR LOW TIDE MARK. CLUSTER 7 PLUMB PILE 8" BROKEN SHELL HOLLOW TO 14" V X 10" DIAMETER (PA ISSUED) CLUSTER 11 PLUMB PILE 4" BROKEN SHELL HOLLOW TO 9" V X 9" DIAMETER (PA ISSUED) CLUSTER 12 BATTER PILE BORER DAMAGE TO 3' V X 2" W X 2" DEEP NEAR LOW TIDE MARK. CLUSTER 15 PLUMB PILE HAS A BORER HOLE TO 26" V x 6" W(BROKEN SHELL) WHICH IS HOLLOWED OUT INSIDE TO 33" V x 10" DIAMETER (PA ISSUED) CLUSTER 28 BATTER PILE 6" BROKEN SHELL HOLLOW TO 9" V X 11" DIAMETER (PA ISSUED) CLUSTER 29 BATTER PILE 9" BROKEN SHELL HOLLOW TO 13" V X 9 1/2" DIAMETER (PA ISSUED) CLUSTER 31 BATTER PILE BORER DAMAGE TO 8" V X 3" W X 3" DEEP NEAR LOW TIDE MARK. CLUSTER 31 BATTER PILE BORER DAMAGE TO 9" V X 4" W X 2" 4' ABOVE M/L. CLUSTER 31 BATTER PILE BORER DAMAGE TO 8" V X 2" W X 2" 5.5' ABOVE M/L. CLUSTER 36 (7 PILES) 1 PILE (NE) SHOWS SECTION LOSS 10" w x 1" DEEP FROM HIGH TIDE MARK DOWN 6' WITH BORER HOLES TO 1 1/2" DEEP</p> <p>SOUTH FENDER GENERAL CONDITIONS AS LISTED ABOVE</p> <p>CLUSTER 5 BATTER PILE BORER DAMAGE TO 14" V X 6" W x 5" DEEP NEAR LOW TIDE MARK CLUSTER 7 PLUMB PILE 5" BROKEN SHELL HOLLOW TO 10" V X 8" W X 9" DEEP 4' ABOVE M/L (PA ISSUED)</p>
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## Field Inspection Report (cont.)

Item No.

## FENDER CONT.

LOWER WALERS ARE HEAVILY BORER DECAYED ON ENDS, FACES AND AROUND BOLT CONNECTIONS. LOWER WALERS SHOW LOSS OF SECTION UP TO + / - 90%. WITH MANY LOWER WALERS MISSING. BOLT CONNECTIONS ARE RUSTED WITH SOME SURFACE LOSS.

DOLPHIN CLUSTER PILES ARE IN SIMILAR CONDITION TO CCA PILES.

SE DOLPHIN CLUSTER HAS 2 BROKEN PILES.

NE DOLPHIN CLUSTER BROKEN PILE UNDER CLEARANCE MARKER

STEEL H-PILES ARE RUSTED WITH MODERATE LOSS (+ / - 70%) OF SECTION NEAR W/L. WITH RANDOM HOLES TO 3/8".

FLANGES NEAR M/L ARE HEAVILY RUSTED AND MALLEABLE WITH LOSS TO 80%.

RANDOM H-PILE FLANGE EDGES REDUCED TO KNIFE EDGE & RAGGED WITH LOSS TO 1" AND DEEP PITTING THROUGHOUT.

NW CLUSTER LEANING AND OUT OF PLUMB. POSSIBLE BROKEN PILES BELOW M/L INDETERMINATE AT THIS TIME.

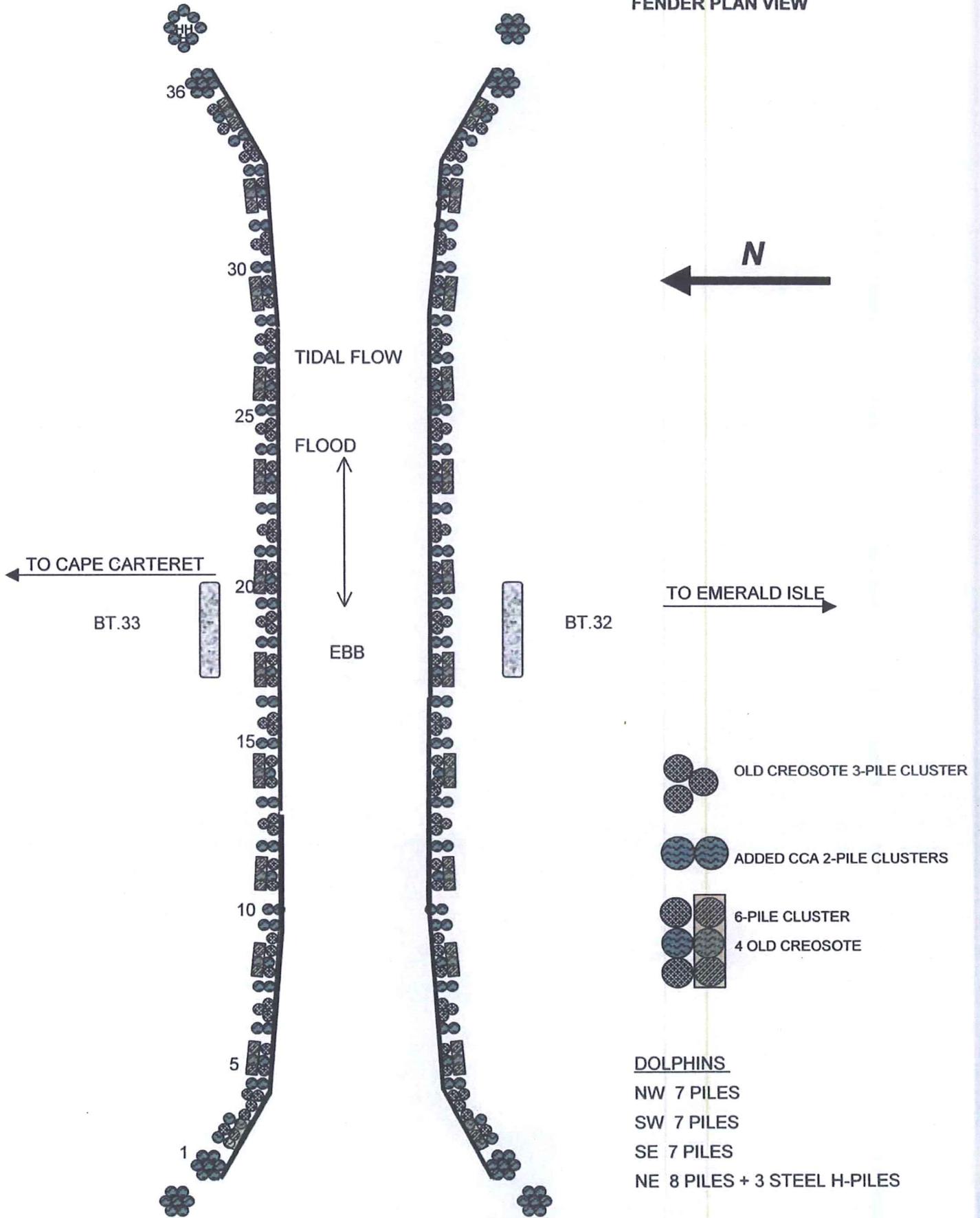
41 DRIFT (7)

MINOR TRASH, DEBRIS AND OLD CABLE SCATTERED THROUGHOUT. 2 OLD PILES LYING ON BOTTOM NEAR SW DOLPHIN CLUSTER.

45-C SCOUR (7)

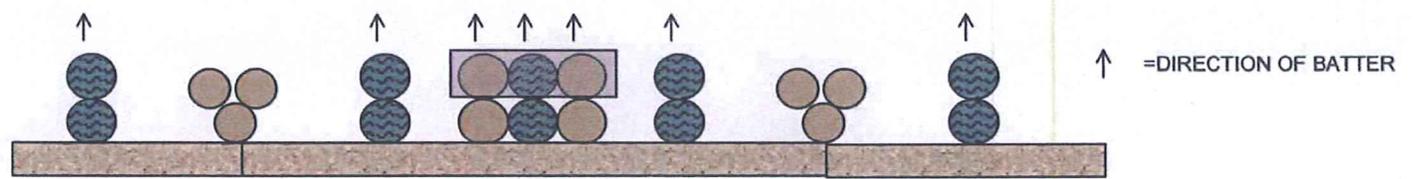
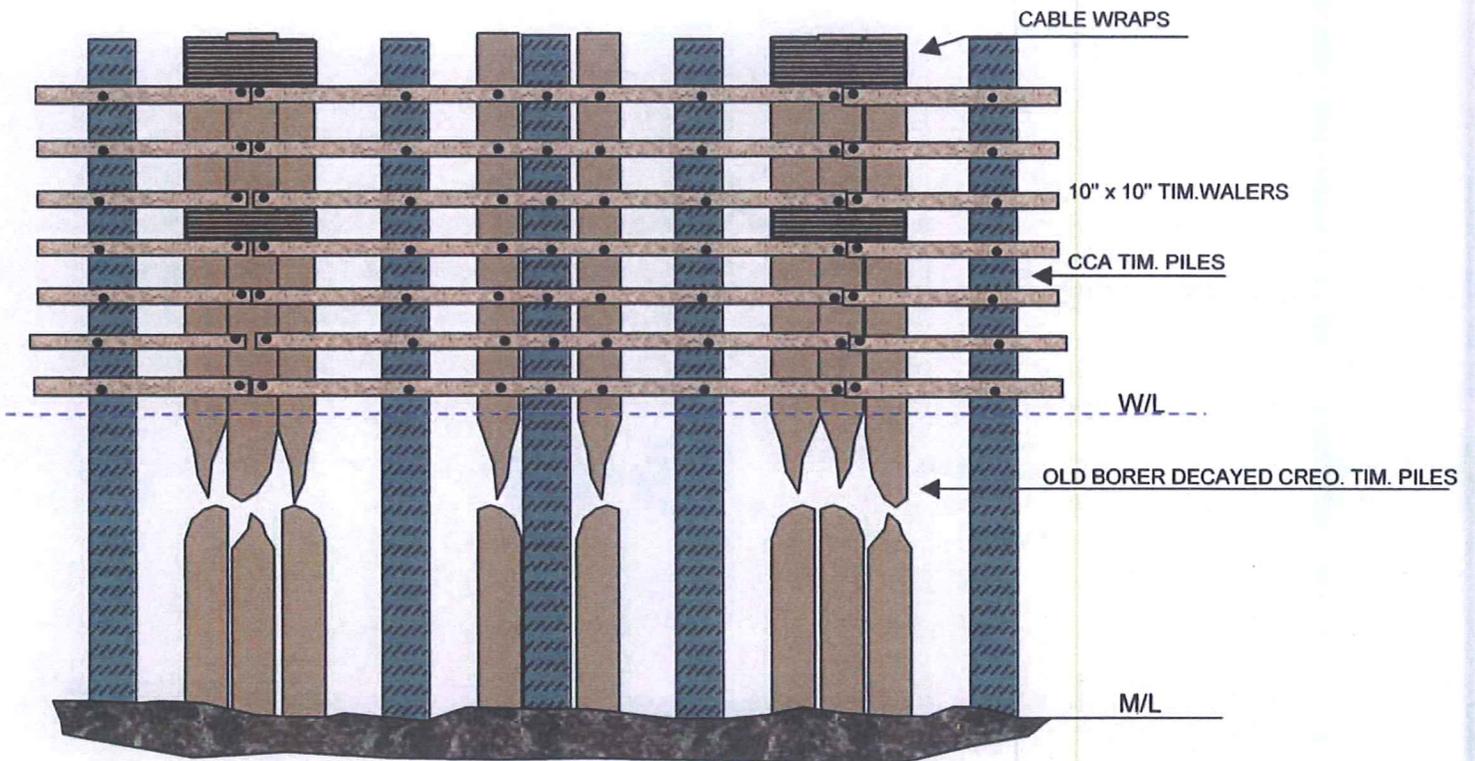
STREAMBED HAS DEGRADED + / - 2' EXPOSING HARD CLAY BOTTOM MATERIALS RATHER THAN THE NORMAL SAND / SHELL MIX COMMON TO THIS AREA. RANDOM PILES SHOW NO MARINE GROWTH +/- 6" OF M/L.

FENDER PLAN VIEW



 OLD CREOSOTE 3-PILE CLUSTER

 ADDED CCA 2-PILE CLUSTERS



## BRIDGE INSPECTOR'S RECOMMENDATIONS FOR MAINTENANCE REPAIRS

Bridge: **150006**

County: **CARTERET**

Division: **2**

Insp. By **W.H. LOTZ**

Date **5/9/06**

Check By:

Date

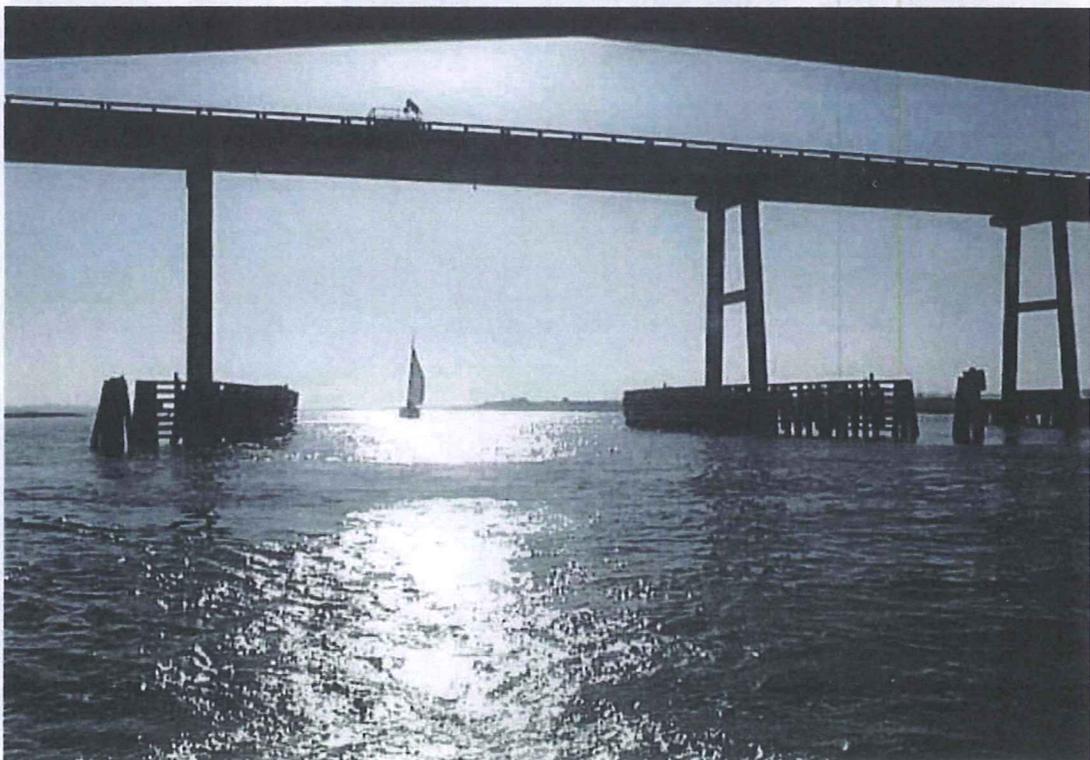
These Repairs Should Be Made Within Twelve Months From The Date Of This Inspection.

Function Code	Description of Function	Unit	Quantity	Remarks	Est. cost
587	MAINT. OF FENDER SYSTEMS	M/H	1200	REPLACE / REPAIR BORER DECAYED WALERS  REMOVE OLD PILE SECTIONS TO REDUCE DEAD LOAD  STABILIZE MISALIGNMENT AND MOVEMENT  REPAIR/REPLACE DETERIORATED STEEL PILES NE DOLPHIN	
587	MAINT. OF FENDER SYSTEMS	M/H		<b>REPAIR/REPLACE BORER DAMAGED PILES PA ISSUED</b> NORTH SIDE CLUSTER 7 PLUMB PILE CLUSTER 11 PLUMB PILE CLUSTER 15 PLUMB PILE CLUSTER 28 BATTER PILE  SOUTH SIDE CLUSTER 7 PLUMB PILE	



LOOKING WEST

LOOKING EAST





VERTICAL CLEARANCE MARKER SW DOLPHIN

(PA ISSUED)

VERTICAL CLEARANCE MARKER NE DOLPHIN





NW DOLPHIN LEANING

SE DOLPHIN 2 BROKEN PILES





NE DOLPHIN BROKEN PILE

NE DOLPHIN RUSTED H-PILE





NE DOLPHIN H-PILES WITH RUST INDUCED HOLES



OVERVIEW BACKSIDE





LOWER WALER DETACHED AND HANGING N. SIDE OTHERS SIMILAR

WALERS MISSING S. SIDE OTHER AREAS SIMILAR





BORER DAMAGE LOWER WALERS

OLD CREO. PILES BORER DESTROYED CREATE ADDED DEAD LOAD





BORER DAMAGED LOWER WALERS

N SIDE CLUSTER 1 BORER DAMAGE





N. SIDE CLUSTER 15 NOTE HATCHET IMBEDDED IN PILE

N. SIDE CLUSTER 29 BORER DAMAGE

} PA ISSUED





CLUSTER 28 N. SIDE BORER DAMAGE

PA ISSUED

NORTH CAROLINA

Revised 6/13/97

DEPARTMENT of TRANSPORTATION

DIVISION of HIGHWAYS

BRIDGE MAINTENANCE UNIT

# STRUCTURE DATA FILE

COUNTY CARTERET BRIDGE NO 150006

- CONTENTS:
- DATA CARD
  - STRUCTURE DATA WORK SHEETS
  - STREAM BED SOUNDINGS & PROFILE SKETCH
  - FORM 501 or 502
  - FORM BMD - 9
  - RETURNED PROMPT ACTION NOTICE SHOWING REPAIRS
  - OTHER SKETCHES & NOTES SHOWING STRUCTURE DETAILS
  - PHOTOGRAPHS

NOTE: STRUCTURE ANALYSIS - CHECK \_\_\_\_\_ YES or NO \_\_\_\_\_  
WHEN PLANS ARE AVAILABLE

FIELD INSPECTOR \_\_\_\_\_

**FATHOMETER RUN NUMBERS ENCLOSED WEST SIDE ONLY**

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DATE: 4/17/06

BY: W.H. LOTZ

WEST SIDE RUN TAKEN S-N +/- 10' FROM BENTS 1-58 W/S TO TOP OF FOOTING AT BT.# 19 = 6.1'

BT. #	W/D	BT. #	W/D	BT. #	W/D	BT. #	W/D	BT. #	W/D
2		14		26		36		48	
3		15		27		37		49	
4		16		28		38		50	
5		17		29		39		51	
6		18		30		40		52	
7		19		31		41		53	
8		20		32		42		54	
9		21		S. FEN.		43		55	
10		22		N. FEN		44		56	
11		23		33		45		57	
12		24		34		46		58	
13		25		35		47			